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Russia's Future Energy Policies:

A Glimpse of Moscow's Impact on EU and US Energy Security in 2025

by

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Russia has strategic importance from an economic and political perspective with its substantial energy resources, military strength, international connections, and influence. Currently the worlds number two oil producer and number one natural gas producer, the state has strengthened control over its energy production and distribution. In addition, Russian companies have negotiated controlling stakes in refineries, pipelines, and the ports of neighboring countries. Analysts are split over how to assess Moscows motives and the impact Russian policies will have on Western markets. To gain insight into Russias intentions, along with the key trends and events that may shape the next 15 years, this paper will describe four scenarios involving Russia, the US, and EU in the year 2025. In order to provide realistic snapshots of a future Russia, this research will review Moscows economic and political policies and examine recent events impacting Europe and the US. These scenarios intend to engage readers to reevaluate their assumptions about the future from a shared reference of discussion. The goal is to raise awareness and enable better strategic decision making to prompt the best outcome for Western and Russian markets and security interests.

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Abstract

Russia has strategic importance from an economic and political perspective with its substantial energy resources, military strength, international connections, and influence. Currently the world's number two oil producer and number one natural gas producer, the state has strengthened control over its energy production and distribution. In addition, Russian companies have negotiated controlling stakes in refineries, pipelines, and the ports of neighboring countries. Analysts are split over how to assess Moscow's motives and the impact Russian policies will have on Western markets.

To gain insight into Russia's intentions, along with the key trends and events that may shape the next 15 years, this paper will describe four scenarios involving Russia, the US, and EU in the year 2025. In order to provide realistic snapshots of a future Russia, this research will review Moscow's economic and political policies and examine recent events impacting Europe and the US. These scenarios intend to engage readers to reevaluate their assumptions about the future from a shared reference of discussion. The goal is to raise awareness and enable better strategic decision making to prompt the best outcome for Western and Russian markets and security interests.

Chapter 1 – Introduction

Western observers are divided over how to assess Russia's economic and political motives. Currently the world's number two oil producer and number one natural gas producer, Russia catapulted from being the twentieth largest economy in the world to the seventh over an eight year period.[1] The state has strengthened control over its energy resources claiming ownership of 90% of Russian natural gas and 30% of oil production.[2] Beyond its borders, Russian companies have tried to negotiate for a controlling stake in pipelines, ports, and storage facilities of other countries in Central and Eastern Europe.[3] In recent years, it has become apparent Moscow is using energy transit procedures and resources as a tool of foreign policy toward some members of the Commonwealth of Independent States (CIS). There is evidence the Kremlin has interrupted natural gas and oil flows to neighboring countries following political disagreements.[4] Some analysts argue Moscow's actions are strictly associated with smart business practices and the disruptions were not politically motivated.[5] However, based on its recent actions toward Ukraine and other nations, as well as its strategic partnerships with other oil producing countries, it is evident Russia is seeking to be a principal force in the global energy market and could threaten US and European interests.

Issue Background and Significance

According to a 2008 Congressional report, Russia will play a dominant role in determining the national security environment in Europe, the Middle East, and Asia.[6] Moscow has an important role in future arms control, the fight against terrorism, and nonproliferation of weapons of mass destruction. As a major energy producer and consumer, its trends and policies also affect US energy markets and economic welfare.[7] On one hand, an increase in its production and exportation could ease dependence on US energy resources in the Atlantic and

Pacific Basins; however, there is concern that the government's desire to further control the energy industry could stifle the amount of oil available globally.[8] In addition, Russia's pipeline politics may influence the CIS and European Union (EU) toward policies unfavorable to US interests. These issues lead to the central question: *How will Russia's energy policies influence future US and European energy security and national interests?*

Research Methodology

This research addresses the question through scenario-based thinking. Peter Schwartz, author of *The Art of the Long View*, describes scenario planning as a disciplined approach to viewing the future.[9] Scenarios enable individuals to arrive at a deeper understanding of the world in which one operates, and use that understanding to make informed decisions toward a desirable future.[10] By introducing multiple perspectives, scenario-thinking challenges commonly held assumptions and provides a context for thinking about the impossibly complex array of factors that affect a decision.[11] Through a series of "what-if" stories, it encourages readers to view each scenario as if it came to pass and delve into their implications to bring assumptions about the future to the surface. There are five distinct phases to build scenarios found in Diana Scearce and Katherine Fulton's guide, *What If? The Art of Scenario Thinking for Non-profits.*[12]

Phase 1: ORIENT. Clarify the issue and use it as an orienting device throughout the remaining four phases. Futurists recommend examining an issue over the next 10 to 25 years. Since energy policies are rapidly evolving but technological development and implementation lags, this research will project forward approximately 15 years to the year 2025. The orient phase includes a literature review of scholarly journals, books, congressional reports, and current news articles to capture the evolving trends in the Russian, European, and American economies.

The thesis question provides the primary issue and focus for the research: *How will Russia's energy policies influence future US and European energy security and national interests?*

Phase II: EXPLORE. Identify the "driving forces" that shape the issue. Driving forces are social, economic, political, and environmental changes that shape future dynamics in predictable and unpredictable ways.[13] They can be either *predetermined elements* or *uncertainties*. Predetermined elements are relatively certain over a period of time, such as the dwindling supply of world oil and concern for the environment, while uncertainties include unpredictable forces such as shifts in policy decisions or technological developments.[14] Chapter 2 will explore the driving forces affecting US, Europe, and Russia.

Phase III: SYNTHESIZE. Synthesize and combine the literature to build the future energy-related scenarios. The driving forces examined in Chapter 2 are the foundation of the scenarios discussed in Chapter 3.

Phase IV: ACT. Explore and test the possible and desirable futures to improve decisions. This research paper will not employ Phase IV. The goal is to generate discussion and enable development of long-term policies, strategies, and plans to bring the desired future.[15]

Phase V: MONITOR. Identify and track a few leading indicators that will signify if a particular scenario is starting to unfold, causing some implications to rise in importance while some uncertainties evolve into predetermined elements.[16] Chapter 4 will discuss some of the signs of change.

Chapter 2 – Exploring the Driving Forces

In the past five years there has been an increase in the number of books, news stories, journal articles, and government reports analyzing Russia's growth in the energy market and speculation about its impact on global energy security. This section analyzes Russia's recent policies and actions, and their impact on Europe and the US. The literature review explores the *driving forces* that will shape each future scenario discussed in Chapter 3.

Russia's Economic and Energy Overview

Following Soviet disintegration, energy resources became Russia's key method for rebuilding its economy, military capabilities, and foreign reach.[17] It is the world's largest producer and exporter of natural gas, the second largest producer and exporter of oil following Saudi Arabia, and third largest energy consumer.[18] Its economy is heavily dependent on energy exports, which account for 50% of total state revenues.[19] The country exports the majority of its oil to Europe for heating; the US imports roughly 3% of Russian oil.[20] The US business community has asserted that structural problems and inefficient government regulations are the major reason for low levels of trade.[21] The CIS is the largest importer of Russian natural gas; however, Moscow has started shifting exports to serve the rising demand in the EU, as well as Turkey, Japan, and other Asian countries.[22] From 1999 to 2007, the increase in world price of oil and gas enabled its real Gross Domestic Product (GDP) to grow at an average rate of 6.7% per year, and virtually eliminate foreign debt.[23] This dependency on exports has made Russia vulnerable to fluctuations in world oil prices, a $1 per barrel increase in the price of crude oil for a year results in a $3 billion increase in the nominal GDP.[24] The state budget remains balanced only when oil prices remain at or above $70 per barrel,[25] thus the recent decline to approximately $40 per barrel has forced the Kremlin to dig into accumulated reserves to meet its obligations

and prop up sinking companies.[26] The trickle down effect of lower profits has been passed to consumers and led to public discontent and scattered protests against increased tariffs on imported goods and rising transit fees. [27] As long as the economy remains dependent on energy exports, Russia faces declining income unless the cost of oil stabilizes and significant investment flows into the energy sector.

The majority of Russian oil and gas production is from a small number of mature fields and there has been limited investment in infrastructure and development of new fields. According to Vladimir Milov, President of the Institute for Energy Policy in Moscow, there is an investment crisis especially concerning Russian gas since new fields are not likely to come on line before 2015.[28] In the winter of 2005-2006, Mosenergo, the Moscow heating utility, cut supplies to some industrial consumers to maintain supplies for domestic heating.[29] Russian oil refineries and pipelines are aging and are also in need of repair or modernization.[30] Investors complain the climate for investment is unreceptive, pointing to a lack of effective property rights protection, jurisdictional conflicts among federal and local governments, and inefficient and corrupt government bureaucracy.[31] Although Western companies are more efficient and better equipped to develop green fields, Russia has taken a 'monopolistic' approach which focuses on political control rather than producing a mutually beneficial profit. [32] In 2008, after much bickering with Russian oligarchs, British representatives withdrew from the joint energy venture TNK-BP in Moscow. The British firm, BP, sunk the most effort into Russia and its withdrawal marked the final chapter of major Western foreign investment in the Russian economy.[33]

The Russian government has expanded its control over the country's energy supplies in the last decade. The state owns 51% of Gazprom's shares, the Russian natural gas monopoly, and 30% of oil production through the government-owned oil firms Rosneft and Gazprom Neft.[34]

It also controls oil and refined product pipelines through the state firm Transneft.[35] Transneft is the largest shareholder in the Caspian Pipeline Consortium, which grants Russia a near monopoly to transport Kazakh oil destined for Western markets.[36] Foreign enterprises are not permitted to own more than 20 percent of shares in any one company.[37] State officials occupy the boards of corporations like Gazprom, Rosneft, and Transneft to ensure that Russia's largest corporations act in the public interest.[38] Prime Minister Vladimir Putin "does not trust foreign ownership and does not consider privatization as 'the best way in diversifying Russia's economy and generating revenue.'"[39] He supports the idea of protecting private property, but believes private companies should not have more control than the state, since only the state represents the interests of the people.[40] Putin believes the country's natural resources secure its international status and ensure economic development and "the state should set the priorities of the energy sector and the companies involved to benefit both the state and the Russian people."[41] He has surrounded himself with former KGB associates, who share his aim to reestablish, preserve, and extend the authority and influence of the state.[42] The blurred distinction between government and business in the energy sector has raised questions about the Kremlin's political motives.

The Tap and Transit Weapons Threat

Analysts speculate Russia's state-controlled energy and transit companies have been used as foreign policy instruments against neighboring countries. In his book *Cold Peace: Russia's New Imperialism,* Janusz Bugajski argues Moscow aims to prolong and deepen European dependence on Russian energy supplies because "economic vulnerability is a mechanism for both financial profit and political leverage."[43] Currently, consumer states that cannot remedy their dependence on Russian gas are the most vulnerable in the short and long-term.[44] According to Bertil Nygren, author of *Putin's Use of Natural Gas to Reintegrate the CIS Region,* there are

two types of energy weapons: the "tap weapon" and the "transit weapon."[45] The tap weapon allows Russia to shut off gas supplies while the transit weapon coerces countries to sell its natural gas to Russia for the offered price, or pay high transit fees to use its pipelines. The strategic goal "is to gain control – not necessarily ownership – of the energy production and transit resources from the Soviet era and ultimately to control the economic (in addition to the security) arena of the CIS region."[46] In the winter of 2005, after the Orange Revolution installed a pro-western president in Kiev, Russia announced plans to implement market prices for gas deliveries to Ukraine. Prices were to increase three-fold and Ukraine vehemently objected, threatening to siphon gas from pipelines transiting its country bound for Europe. The gas war ended in January 2006, when Gazprom and the Ukranian government reached a compromise. In July 2008, Transneft announced that oil deliveries to the Czech Republic would be cut from the monthly volume of 500,000 to 300,000 tons for technical reasons. Analysts speculate it is not a coincidence the announcement came two days after the US and Czech governments signed an agreement to deploy a US missile defense system to Czech territory.[47] Since Russia has demonstrated its willingness to use energy for political blackmail, there is concern that energy dependent countries are sensitive to Russian policies to protect Russian interests. The lever of influence over European policy has often frustrated US foreign policy since European states "are often hesitant to challenge Russia when the Kremlin can cut energy supplies with the turn of a valve."[48]

Expanding Control of Regional Infrastructure

A major focus of Russian energy policy has been to gain more control of natural resources from neighboring states to expand its sphere of influence. The objective is to trap states into a web of financial and commercial ties that allow Moscow to control their policies.[49]In

2002, Russia attempted to gain control of the gas pipeline, Beltranshaz, transiting Belarus for Western Europe. Belarus refused based on political reasons and President Alyaksandr Lukashenka argued lost control of Beltranshas, "'would sell control of the country.'"[50] Two years later, Gazprom cut off energy supplies to Belarus citing a pricing dispute. The gas disruption caused energy shortages to Poland and Germany and an agreement was reached with Belarus accepting higher prices, but still below the market rate, in exchange for a greater Russian share in the Belarusian gas pipelines.[51] Other countries have also made agreements with the Kremlin that limited their control. Yukos, a Russian firm, gained majority control of a Lithuanian refinery by slowing oil supply and buying it at a reduced price.[52] In January 2006, Ukraine transferred control of its gas import policy to a nontransparent intermediary company, RosUkrEnergo, which supplies Ukraine with natural gas originating from the territories of the Russian Federation.[53] That same year Gazprom threatened to increase gas prices to Armenia but agreed to a smaller increase for significant control of the construction of a gas pipeline transiting from Iran.[54] If fully developed, the pipeline would make Armenia, Georgia, Ukraine, and the EU less dependent on Russian gas.[55] In November 2006, Gazprom increased its share of the pipeline's operator, ArmRosGazprom, to 58 percent.[56] The Kremlin's energy dynasty assures a level of influence in the former satellite countries.

Russia is seeking alliances with other dominant energy players. Moscow is interested in cooperation with the energy sector of several states in the Gulf region. In the past four years, the Kremlin has signed numerous agreements to protect investments and promote economic cooperation with Jordan, Syria, Egypt, and Qatar. In addition, Moscow agreed to a 40-year contract with the Saudi government to explore and develop a natural gas field in the Rub el Hali desert. "Saudi Arabia and Russia are the two main producers of oil, and Russia is interested in

the idea of forming a gas cartel with Iran and Qatar."[57] As an ally and opponent of the Organization of Oil Exporting Countries (OPEC), analysts consider Russia's willingness to export and support OPEC as a critical component influencing future world prices.[58]

Moscow is also interested in the Arctic region. In 2007, the government formed a working group to formulate a plan to develop the Arctic zone.[59] As a symbolic claim to the region, a Russian expedition team placed a titanium Russian flag on the seafloor of the North Pole. The *United States Geological Survey World Petroleum Assessment 2000* estimated that the Arctic Ocean could hold 25 percent of the world's undiscovered oil and gas reserves.[60]

Europe and the United States

The EU's dependence on Russian energy varies from state to state. While Baltic States are more dependent on Russian gas, some analysts argue Moscow is dependent on Western Europe since revenues from oil and gas exports are critical to the Russian economy.[61] Europe receives the lion's share of Russian oil exports and continues to diversify its energy sources and transit routes.[62] Natural gas accounts for 24 percent of EU consumption, oil 37 percent, solid fuels 18 percent, nuclear 15 percent, and renewables 6 percent.[63] States also vary in their percentage of oil supplies from Russia. Hungary, Slovakia, and Poland import more than 75 percent of their oil from Russia, while Germany, Italy, France, and Denmark import less than 26 percent.[64] Overall, the Middle East is the largest oil supplier to Europe and other suppliers such as Russia, Latin America, and Africa, provide diversification.[65] Thus, some states view Russia and its energy policy as a threat to state security, while others consider it a viable alternative to diversify their resource options.[66]

The US encourages European countries to reduce their dependency on Russian energy resources. The US has advocated the construction of multiple pipelines to supply energy from

Central Asia and Azerbaijan to Europe. It has also supported a Turkey-Greece-Italy gas pipeline projected to be completed in 2012, and backed expansion of oil pipelines in Poland and Ukraine.[67] Meanwhile US officials have criticized the Nord Stream project, which crosses the Baltic Sea floor, connecting Russia to Germany and bypasses central and eastern European countries.[68] The US and Baltic countries are concerned the new pipeline will give Moscow more leverage on energy issues.[69] The success or failure of these projects depend more on whether energy firms find them profitable and less dependent on US diplomatic skill.[70]

Although the US imports a minimal amount of Russian oil, it has a vital interest in Russian business policies. Oil has proven to be a magnet for conflict, a weapon for petro-states, and a stimulant for terrorism. The US depends on foreign imports for nearly 60 percent of its energy needs, and future requirements are projected to rise to 70 percent by 2025.[71] Analysts speculate world oil demand will grow by 50 percent in the next 15 years, causing competition for energy resources to be an increasing source of tension.[72] Thus, US policymakers encourage opening, integrating, and diversifying energy markets to ensure global energy security. The 2006 *National Security Strategy* pledged to work with resource-rich countries to increase their openness, transparency, and rule of law and specifically committed to work with Russia for its accession to the World Trade Organization (WTO).[73] The US administration is aware the world's dependence on a few suppliers is neither responsible nor sustainable over the long term and is also investing in alternative energy sources.[74] However, there is no acceptable replacement on the near horizon and Russia's role in geopolitics may strengthen as Europe and the US remain dependent on oil.

Summation of Driving Forces

The driving forces that are the most important and most uncertain are known as *critical uncertainties,* and they are the foundation of the future scenario set.[75] The driving forces will frame the thesis question: *How will Russia's energy policies influence future US and European energy security and national interests?* The research shows that Russia has slowly acquired state control of the energy market and benefitted from an economic boom supported by high oil prices. Russia's methods to secure its prosperity are uncertain as oil and gas fields mature and investment stagnates. To capture the *uncertainty* of Russia's methods to maintain a stronghold in the energy market, one axis will be labeled: open market and closed market. "Open market" refers to a spirit of cooperation and transparent policies encouraging foreign investment in Russia. "Closed market" represents a government centric approach with guarded policies that deter foreign investment. The second axis will address the *uncertainty* of the US and EU's capability to achieve oil independence and the impact that would have on Russia. This axis will be labeled: energy dependent and energy independent.

There are also predetermined driving forces that will guide the scenario development. There may be occasional dips and spikes of oil per barrel over the next 15 years, but the price will generally increase in the future as global demand grows, oil fields mature, and the possibility of discovering massive oil fields becomes more unlikely. In addition, the US and European administrations will continue promoting development of alternative energy sources. Finally, for the purpose of this research, energy independence will be defined as the state's ability to maintain self-sufficiency in its energy needs by producing the amount it consumes through technological advancement, diversification projects, and shifts in policies.

Chapter 3 – Scenario Building

The next portion of the research synthesizes the *critical uncertainties* into fictional stories of a possible future. The future paths represented in Figure 3.0 illustrate the balance of the West's pursuit for energy independence against Russia's ability to maintain a nominal role in the energy sector. The scenarios are not intended to be predictive, they are designed to stretch thinking about the opportunities and threats the future might hold, and guide short and long-term strategic decisions.[76] Each scenario provides a snapshot of the US, Europe, and Russia in the future world.

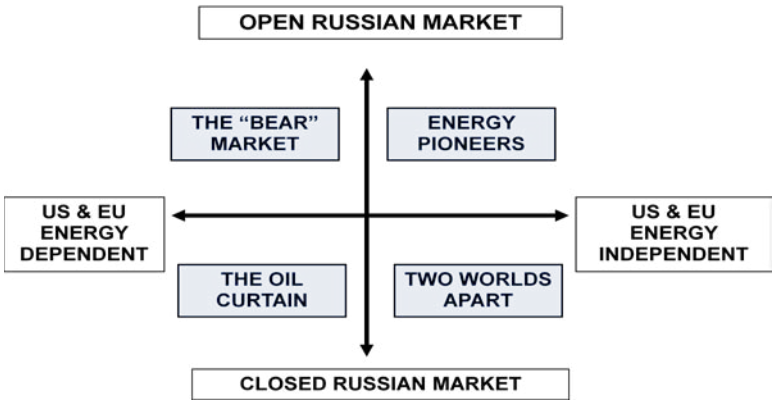

Figure 3.0: Russia's Energy Policies and US and EU Energy Security in 2025

Scenario 1: The Oil Curtain

The oil curtain that descended across the globe became undeniably visible in 2025. Oil production peaked five years earlier, nearly a decade after most geologists predicted.[77] Since then, import laden nations have been on a quest to secure resources, thus increasing competition and tension between major consuming states like the US, China, and India. While the EU and US took strides to reduce their dependence on oil the past 15 years, it remains one of their primary sources of energy. US oil imports are up from 60 to 70 percent as predicted,[78] and EU oil and gas account for 65 percent of energy consumption, up from 61 percent in 2007.[79] Europe

remains the largest consumer of Russian oil. Approximately three-fourths of Russian crude oil is exported, and two-thirds is concentrated in Belarus, Ukraine, Germany, Poland, and several destinations in Central and Eastern Europe. The remainder is sold on the world markets.[80]

Terrorism is a major concern. US forces in the Persian Gulf continue to secure this vital area of interest which houses 61 percent of the known world supply[81] and America has expanded oil investments in Africa and South America over the past 15 years. Continued presence in predominantly Muslim nations in the Middle East has exposed the US to resentment, vulnerability, and attack. Osama bin Laden's fatawa in 1996, "Declaration of War against the Americans Occupying the Land of the Two Holy Places,"[82] still reverberates among extremists. Oil dependence has strengthened oil-exporting nations that oppose US and European interests. US oil prices skyrocketed in 2021when the Venezuelan president threatened to cut supplies in protest of American involvement over a conflict between Venezuela and Colombia. The price of energy also drove the growth of inflation and trade deficits. Since the price of imported oil spiked in 2020 with the realization that oil production peaked, many importers had to increase their money supply to offset their trade deficits.

The demand for oil and gas has enabled Russia to continually turn inward. The few foreign companies investing in the energy sector are firmly under government control limiting creativity, competition, and technological advancement. The lack of development in new oil and gas fields, infrastructure, and technology caused energy shortages and an unavoidable gap between demand and supply. Russia cut exports for several weeks to provide for the domestic market the last three years. The high oil prices have generated substantial funds for the Russian economy; however, it has also caused high inflation. Since 2020, consumer price inflation rose to 17 percent, and producer prices grew to 25 percent, reminiscent of increases during 2007,

which rose to 11.9 percent and 17 percent.[83] Russia's high inflation and rift in distribution of oil wealth have led to political instability.

While some European countries diversified their oil and gas imports to prevent disruptions to supply, others strengthened their ties with the Kremlin. The Nord Stream gas pipeline, tracing the Baltic Sea from Russia to Germany, was completed in 2010. The pipeline bypassed controversial countries, eliminated transit fees, and provided Russia with leverage to raise prices in neighboring states without the threat of fuel siphoning. Pricing disputes became common place with the Baltic States who were unable to afford rates equivalent to their European counterparts. Russia has gained control over 60 percent of the energy infrastructure in Ukraine, Belarus, and Armenia to compensate for lower prices. In the past few years, gas and oil have been used to influence political decisions as energy disruptions tend to coincide with political disagreements. In 2020, Nord Stream shut down for maintenance around the same time the West opposed Moscow's second intervention in Georgia. Disruptions occurred again when the US and Western Europe condemned Russia's support of Syria's nuclear program. Finally, Russia is courting major oil producers in the Middle East and South America to form an energy alliance that regulates global oil distribution and limits competitive pricing. If the regulations and price controls come to fruition, the US and EU economies will be vulnerable to nations who do not have US and EU best interests in mind.

Despite strides to achieve energy independence, Americans and Europeans are still dependent on imports. There is nominal diversification in hydrocarbons, wind, electricity, and biofuels; but nothing substantial altering European and American ways of life. Meanwhile, the petro-dependent state of Russia, has become more aggressive and protective of its resources and actively uses energy to influence neighboring states and dictate policy.

Scenario 2: The "Bear" Market

Russia's economy is still dependent on natural resources, and fortunately for energy-rich countries like Russia, so is the rest of the world. The "bear" has emerged as a political powerhouse in Europe and Asia as a result of its thriving economy. By opening its markets to investors in 2010, exploration for new reserves and technological advancement improved productivity and efficiency. The state-controlled industry developed a new vision in response to the 2009 recession. To spur development and reignite its economy during the economic downturn, the Kremlin adopted a spirit of cooperation, which removed the barriers and bureaucratic policies formerly plaguing the industry. Russia's improved capacity to deliver energy led to bilateral agreements with China, which views Russia as a dependable energy provider. Historically, ties with China had not been attainable – but with the enticement of oil, the Kremlin forged political agreements to counter US influence in Central Asia. In order to secure the safe transport of its energy exports to Europe, the Kremlin pressured neighboring governments for expanded control of their energy infrastructure. Russian oil and gas companies own controlling shares of distribution and refining assets in Ukraine, Georgia, Belarus, Armenia, and Lithuania. These states depend on Russian energy supplies and act as a buffer to offset Western policy.

Tension is mounting over the Arctic reserves. As the world production rates peaked in 2020, the Kremlin formerly claimed more than half of the Arctic seabed. Under the *United Nations Convention on the Law of the Sea* established in March 1997, a state can claim a 200 nautical mile zone and beyond that up to 150 nautical miles of rights to the seabed.[84] The UN rejected this claim for lack of evidence and the US, Canada, Norway, Denmark, and Greenlandare also seeking rights to the region. In the past five years, Russia has reinforced its Northern Fleet and border guard forces.

The US and EU's dependence on imports has weakened their political power and economic stability. US oil imports climbed from 60%, in 2008, to 70% as projected by analysts,[85] making America susceptible to price spikes and inflation. In response to market fluctuations, Washington's aid to lower income and vulnerable industries has contributed to the nearly $6 trillion deficit. Although Americans have called for energy independence since the 1970s, those voices grew silent when the price to be paid weighed on their pocketbooks or landed in their backyard. There have not been any plans to build a nuclear power plant in the past 15 years. High taxes and environmental restrictions depleted corporate profit margins and limited alternative energy investments. Although Western Europe has attempted to diversify oil and gas imports, it still depends on Russian resources. Border states, which rely almost entirely on Russian fossil fuels, are particularly vulnerable to Kremlin policies. The EU and US are mindful of the growing cooperation between China and Russia. The expansion of oil production in Russia and growing Chinese demand for resources has made them allies and common opponents of US policies. A major debtor of the People's Republic of China, the US limits criticism of human rights violations and policies.

In conclusion, the geopolitical power scale is slowly tilting toward Russia and the East. The Kremlin's open business policies enabled major investment in its energy infrastructure as the world grew more dependent on fossil fuels. Despite the desire for energy independence, the US remains one of the world's largest importers of oil, second only to China, and EU imports have grown by 10 percent. Russia's strong economy has strengthened its soft power while the US is mindful of its economic vulnerability.

Scenario 3: Energy Pioneers

Skyrocketing fuel prices in 2008 reignited American and European interest to eliminate dependence on foreign oil. In 2009, the Obama administration made energy a top priority and implemented elements of its *New Energy for America* plan within months of entering office. The spirit of reform transcended borders as the EU committed to the *Global Energy Initiative* two years later. By 2020, both plans and additional initiatives had weaned the US and Western Europe from foreign dependence on oil and gas. Government regulations, research and development, and incentives spurred creativity in the energy market. Fossil fuels still represent over 60 percent of the total energy supply in the world today, but new technological developments, reduced consumption through increased efficiency, and diversified sources have made the EU and US energy independent. Clean coal and gas production are expected to overtake oil as the primary source of energy in 2030. Despite regional disparities, the US averages 15 percent electricity generation from renewable sources: hydroelectricity, solar power, wind energy each with close to 5 percent, and less than 1 percent by geothermal and tidal power.[86] Nuclear energy has also expanded; the US and EU each built two new reactors. In addition, Western Europe invested new technology and infrastructure in the Caucasus, Baltic States, and North Sea, creating a self-sufficient European source of gas and oil. By broadening energy sources, the EU and US have lowered their vulnerability to foreign pricing and policies.

The Kremlin's government reforms, coined "Perestroika 2010" by American economists generated cooperation between Western and Russian businesses as it gained access to the WTO. State-owned companies, such as Gazprom and TransNeft, lifted strict policy controls and regulations that previously deterred foreign investors. Moscow encouraged transparency, as long as it did not jeopardize state security and several US and European investors poured money into Russia's technology and energy infrastructure. Joint ventures enabled the development of the

oil-rich Siberian region fueling economic prosperity. The petro-economic boom propelled social and military reforms. Although the US and EU diversified their energy resources, much of the world remains dependent on oil and gas. China and India are heavy consumers of Russian oil, and lesser developed nations also use it as their primary source of energy. The Kremlin continues to seek balance against the US hegemony, especially with the buffer from its border states slowly dissipating. Hence, China's alliance is crucial to Russian economic prosperity and diplomatic influence.

In the spirit of innovation, environmental pioneers led the US and EU in a liberating quest toward energy independence and generated a new sense of political and economic freedom. While oil and gas remain important to the economy; reduced energy consumption and new technologies have made them options among a myriad of possibilities. This has led to a smaller military footprint in the Middle East and a reduction in funds to countries that are less friendly to the US, such as Venezuela. Russia remains a dominant player in global politics and the US and EU have reached out to build stronger ties in this era of openness. The future is bright as the world continues to explore the technological promises.

Scenario 4: Two Worlds Apart

US and EU foreign oil and gas consumption steadily decreased in the past 10 years. Following the 2008 oil price spikes and heightened awareness of their vulnerability, they focused on the largest area of oil consumption, the transportation sector. In 2008, oil provided more than 96 percent of the fuel for vehicles in the US,[87] today it is about 50 percent. National leaders independently increased fuel reduction and energy efficiency standards within the auto industry and provided incentives for biofuel investment and consumer purchases. They also shifted federal funding from new road construction to mass transit projects. Continental rail travel is up

20 percent from 2000 and ten major cities recently completed metro transit projects. The US and European nations also expanded energy investment and consumption in domestic oil, wind, solar, nuclear, liquid natural gas, coal, and hydropower projects.

US and EU forward thinking generated a new found sense of freedom. Western Europe's investments in its neighboring states have made the CIS economically and politically independent of Russian influence. In 2020, when Russian forces crossed the Georgian border to contest Georgia's membership in NATO, European leaders protested and the forces withdrew within one week. While the threat of terrorism still exists, there has not been an attack on US soil since 2001. Analysts claim decreased oil funds to countries opposing US interests and the diminished presence of American troops in the Persian Gulf are the main reasons. In addition, fluctuations in oil prices have had minimal effect on the US and EU economies. With increased rail transportation, fuel-efficient vehicles, and alternative energy sources, they are sheltered from price spikes. While the West has diversified resources, Russia has grown noticeably more inward.

The state-controlled energy market experienced highs and lows during the past 15 years. Lack of investment from foreign companies stalled technological improvements in development, infrastructure, and transportation. Initially, Europe's reduction of gas imports significantly affected the Russian economy; however, Russia rebounded from much of the shock with expanded exports to countries such as India, Japan, and China. In 2022, the completion of an oil pipeline linking Siberia with China boosted Moscow's export capability and elevated it from the fifth-largest exporter of crude oil to energy-hungry China in 2008, [88] to second in today's market. However, China is not considered an optimum market. Chinese consumption is expected to decline as it seeks to reduce dependence on imports by increasing use of its vast domestic

reserves of coal.[89] Thus, Russia may once again find itself in a slump in the next decade unless it can diversify economically.

The world today represents two diverging worlds, those seeking a future free from oil and those clinging to the past few decades. The US and EU have achieved a sense of energy independence by cutting back on energy use and developing alternatives. Russia is seeking to maintain its economic growth by spreading into new markets, but it is slow to develop with its closed market ideology. There is a growing rift between Russia and the West's economic and diplomatic policies.

Chapter 4 – Conclusion and Recommendations

In the past decade, there has been noticeable growth of Russia's economic wealth and political power. The EU's dependency on Russian oil and gas combined with Moscow's pipeline politics have spurred debate among political analysts of Russia's emerging threat to energy security. The US and EU have yet to implement a comprehensive plan that addresses the rising challenges facing states dependent on energy imported from countries that may not have their best interests in mind. This research does not recommend a single approach or set of policies, nor does it support a particular argument. Rather, the intent is to generate ideas and a fresh approach to stimulate strategic discussion.

Summary of Findings

The scenario study in Chapter 3 illustrates that a strategic landscape that promotes both critical uncertainties to gravitate toward energy independence and a Russian open market will bring about the optimal future titled "Energy Pioneers." This desired end state not only assures EU and US sustainability as the world treads toward peaking oil production, it enables government leaders to interact in the global arena without influence from exporting nations. Russia will continue to operate in its best interests, as can be expected from any state. However, the open market will assure continued growth while the world moves toward alternative energies. Moscow's strength will enable domestic and regional stability. Conversely, minimal progress toward energy independence and a closed market economy may lead to the worst case scenario, "The Oil Curtain."

The research employed the phases of Scearce and Fulton's scenario-thinking model, with the exception of the Act phase (see Table 4.0). During the Act phase an organization learns, adapts, and takes effective action. In addition, the organization identifies patterns and insights

that emerge as building blocks for a strategic agenda that makes progress toward long-term goals.[90] There would be little value added in role playing a scenario, therefore, this research defers the Act phase to decision makers and think tanks.

Phase	Name	Methodology	Chapter	Result
1	Orient	Clarified the issue and identified thesis	1	Successful
2	Explore	Researched issue from various sources to identify driving forces	2	Successful
3	Synthesize	Identified critical uncertainties and two-dimensional framework for scenario study	3	Successful
4	Act	Recommend approach to US and EU government	N/A	Deferred
5	Monitor	Identified indicators	4	Successful

Table 4.0. Summary of results – scenario-thinking model

Areas of Further Research

A follow-on effort that focuses on the Act phase would be beneficial to progressing toward the desired end state. While US think tanks have concentrated on energy independence to assure energy security and preserve the environment, a nonpartisan study group with knowledge on Russian foreign policy should consider methods to promote openness with Moscow. Relations between Moscow and Washington have cooled since the turn of the century, when the US and Russia shared a common interest in combating terrorism. From Moscow's perspective, "years of being ignored or bypassed by Washington on a series of important issues ranging from NATO expansion to missile defense have come to underpin a profound sense of disappointment."[91] In addition, the EU should invest in an interconnected approach to energy security. Currently European interconnection is limited to bilateral agreements with a series of limited cross-border trade where members do not agree on a unified approach to energy. Some, such as the UK, support a liberal, competitive approach, while others favor a national approach

that provides support for national energy champions. Andrew Monaghan, author of *Russia and the Security of Europe's Energy Supplies: Security in Diversity*, argues the lack of unity gives Russia freedom of movement in negotiations, limits trade, and lowers security of supply.[92] At a minimum, the US and EU should implement policies that promote energy independence and continue monitoring Russia's energy policies.

The final phase, Monitor, recommends identifying leading indicators that act as warning signs of a potential future. Indicators promoting energy independence will be evident in the government and civilian sector. Government incentives promoting development and use of alternative energy, strict emission regulations, and new legislation are signs that state leaders are moving toward energy independence. Other indicators include investing in domestic production and diversifying imports. From the civilian sector, massive shifts to "green" products, mass transit and fuel-efficient vehicles also trend toward energy independence. Russia's advance toward openness will also be played out on the global stage. While privatizing state-controlled firms may be interpreted as an act toward openness, it does not guarantee cross-border relations. Corruption and bad policies can still exist under these conditions. However, legislation that promotes business transparency and fair property, licensing, and tax legislation, will encourage investment. No matter what scenario unfolds, Moscow will likely take strides to maintain a sphere of influence in the former Soviet states. As long as they remain dependent on Russian oil, they are subject to Kremlin policies. This paper argues the EU's ability to protect the Baltic States is based on its energy independence.

Recommendations

Although the US and EU recognize energy independence as an important factor to security, their current courses of action appear to make little progress in that direction. However,

history demonstrates new political administrations often offer fresh ideas and renewed vigor to implement policy changes. This would be an ideal time to implement scenario thinking to seek new possibilities, reexamine US energy issues, and ask the tough questions. "Scenarios are designed to stretch our thinking about the opportunities and threats that the future might hold, and to weigh those opportunities and threats carefully when making both short-term and long-term strategic decisions."[93]

This research provides a launching point for an independent study group, congressional committee, or combined team of economists, environmentalists, and foreign experts to delve into the issue, pursue additional dimensions, and develop a strategic plan. Currently, energy issues tend to focus on the environment; this study would analyze it from a security standpoint and make recommendations to political leaders. As much as the government plays in implementing policy, the public must also support new measures and be willing to make changes.

The US is responsible for its own path and although cross talks with the EU and Russia can encourage cooperation, ultimately leaders will act in what they consider to be the nation's best interests. The indicators discussed earlier will provide insight into which future each state may be approaching. Armed with that knowledge, the US can poise itself for the best outcome.

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[1] Rutland, *Putin's Economic Record: Is the Oil Boom Sustainable*, 1051.
[2] Woehrel, *Russian Energy Policy Toward Neighboring Countries*, 2.
[3] Ibid., 1.
[4] Nygren, *Putin's Use of Natural Gas to Reintegrate the CIS Region*, 5.
[5] Monaghan, *Russian Oil and EU Energy Security*, 6.
[6] Goldman, *Russian Political, Economic, and Security Issues and U.S. Interests*, 3.
[8] Rutland, *Putin's Economic Record: Is the Oil Boom Sustainable*, 1051.
[7] Goldman, *Russian Political, Economic, and Security Issues and U.S. Interests*, 20.
[8] Pirog, *Russian Oil and Gas Challenges*, 18.
[9] Schwartz, *The Art of the Long View*, 4.
[10] Scearce and Fulton, *What If? The Art of Scenario Thinking for Non-profits*, 9.
[11] Schwartz, *The Art of the Long View*, xiv.
[12] Scearce and Fulton, *What If? The Art of Scenario Thinking for Non-profits*, 24.

[13] Ibid., 27.
[14] Ibid., 27.
[15] Glenn, *Introduction to the Futures Research Methods Series*, 4.
[16] Ibid., 33.
[17] Bugajski, *Cold Peace: Russia's New Imperialism*, 37.
[18] Pirog, *Russian Oil and Gas Challenges*, 1.
[19] Goldman, *Russian Political, Economic*, 10.
[20] Energy Information Agency, "U.S. Net Imports by Country."
[21] Monaghan, *Russia and the Security of Europe's Energy Supplies: Security in Diversity*, 3.
[22] Energy Information Agency, "Country Analysis Briefs: Russia."
[23] Goldman, *Russian Political, Economic*, 10.
[24] Pirog, *Russian Oil and Gas Challenges*, 4.
[25] Ibid.
[26] Klare, "Dirt-Cheap Gas in 2009."
[27] Ibid.
[28] Monaghan, *Russia and the Security of Europe's Energy Supplies: Security in Diversity*, 2.
[29] Novosti, "Russia May Face Gas Supply Crisis in 2 years – Gref,"
[30] Energy Information Agency, "Country Analysis Briefs: Russia."
[31] Pirog, *Russian Oil and Gas Challenges*, 18.
[32] Monaghan, *Russia and the Security of Europe's Energy Supplies: Security in Diversity*, 3.
[33] Stratfor, "TNK-BP: The End Begins."
[34] Woehrel, *Russian Energy Policy Toward Neighboring Countries*, 3-4.
[35] Ibid., 4.
[36] Ibid., 4.
[37] Ciziunas, *Russia and the Baltic States: Is Russian Imperialism Dead*, 294.
[38] Mankoff, *Russian Foreign Policy and the United States After Putin*, 48.
[39] Ciziunas, *Russia and the Baltic States: Is Russian Imperialism Dead*, 294.
[40] Ibid.
[41] Ibid., 295.
[42] Ibid., 295.
[43] Bugajski, *Cold Peace: Russia's New Imperialism*. 37.
[44] Nygren, *Putin's Use of Natural Gas to Reintegrate the CIS Region*, 3.
[45] Ibid., 5.
[46] Ibid., 5.
[47] Goldman, *Russian Political, Economic, and Security Issues and U.S. Interests*, 1.
[48] Stratfor, "Global Market Brief: Europe Loosens the Energy Ties that Bind to Russia."
[49] Pranas, *Russia and the Baltic States: Is Russian Imperialism Dead*, 291.
[50] Nygren, *Putin's Use of Natural Gas to Reintegrate the CIS Region*, 5.
[51] Ibid., 7.
[52] Pirog, *Russian Oil and Gas Challenges*, 7.
[53] Rosukrenergo official site. "Company History."
[54] Balmaceda, *Corruption, Intermediary Companies and Energy Security*, 17.
[55] Ibid.
[56] Ibid.
[57] Smith, *Russia and the Persian Gulf*, 1.
[58] Monaghan, *Russian Oil and EU Energy Security*, 14.
[59] Smith, *Russia and the Arctic*, 1.
[60] Ibid.
[61] Monaghan, *Russian Oil and EU Energy Security*, 9.
[62] Ibid., 8.
[63] Monaghan, *Russia and the Security of Europe's Energy Supplies*, 8.
[64] Ibid.
[65] Ibid.

[66] Ibid., 9.
[67] Woehrel, *Russian Energy Policy Toward Neighboring Countries*, 17.
[68] Ibid.
[69] Ibid., 18.
[70] Ibid., 18.
[71] Hirsh, *Peaking of World Oil Production*, 15.
[72] Ibid., 12.
[73] President, *National Security Strategy*, 28-29.
[74] Ibid., 28.
[75] Scearce and Fulton, *What If? The Art of Scenario Thinking for Non-profits*, 28.
[76] Ibid., 7.
[77] Hirsch, *Peaking of World Oil Production*, 8.
[78] Hirsch, *Peaking of World Oil Production*, 15.
[79] Monaghan, *Russia and the Security of Europe's Energy Supplies*, 8.
[80] Pirog, *Russian Oil and Gas Challenges*, 4.
[81] Klare, *Rising Powers, Shrinking Planet*, 178.
[82] Sandalow, *Freedom From Oil*, 22.
[83] Rutland, *Putin's Economic Record*, 1067.
[84] Smith, *Russia and the Arctic*, 3.
[85] Hirsch, *Peaking of World Oil Production*, 15.
[86] "Millenium Project, 2020 Global Energy Scenarios," 32.
[87] Sandalow, *Freedom From Oil*, 14.
[88] Associated Free Press, "Russia, China sign Landmark Oil Pipeline Deal."
[89] Monaghan, *Russia and the Security of Europe's Energy Supplies*, 7.
[90] Scearce and Fulton, *What If? The Art of Scenario Thinking*, 31.
[91] Mankoff, *Russian Foreign Policy and the United States After Putin*, 47.
[92] Monaghan, *Russia and the Security of Europe's Energy Supplies*, 14.
[93] Scearce and Fulton, *What If? The Art of Scenario Thinking*, 7.

Bibliography

AFP, "Russia, China sign Landmark Oil Pipeline Deal," 28 October 2008. http://afp.google. com/article/ALeqM5hxwJb58LDBm9oEZuxHnCeeeTXC2g?index=0.

Balmaceda, Margarita M. "Corruption, Intermediary Companies, and Energy Security: Lithuania's Lessons for Central and Eastern Europe." *Problems of Post-Communism* 55, no. 4 (July-August 2008): 16-28.

Bugajski, Janusz. *Cold Peace: Russia's New Imperialism.* Westport, CT: Praeger, 2004.

Ciziunas, Pranas. "Russia and the Baltic States: Is Russian Imperialism Dead?" *Comparative Strategy* 27, no. 3 (May-June 2008): 287-307.

Energy Information Agency (EIA) Country Analysis Briefs: Russia, May 2008. http://www.eia.doe.gov.

Energy Information Agency (EIA) Official Energy Statistics from the US Government. "US Imports," 28 July 2008. http://tonto.eia.doe.gov/dnav/pet/pet_move_impcus_a1_NRS_ep00_im0_mbbl_a.htm.

Glenn, Jerome C. "Introduction to the Futures Research Methods Series." AC/UN Millennium Project Paper, 1994. http://mp.cim3.net/file/project/mp-sofi-sd/private/Futures_Method/1-introd.PDF.

Goldman, Stuart D. *Russian Political, Economic, and Security Issues and U.S. Interests*, CRS Report for Congress. Washington, DC: Congressional Research Service, August 2008.

Hirsch, Robert L., Roger Bezdek, and Robert Wendling, *Peaking of World Oil Production: Impacts, Mitigation, & Risk Management*, special report, February 2005.

Klare, Michael T. "Dirt Cheap Gas in 2009: Be Careful What You Wish For." *Alternet*, 14 January 2009. http://www.alternet.org/sotry/119598/.

_____. *Rising Powers, Shrinking Planet: The New Geopolitics of Energy*. New York, NY: Henry Holt and Company, LLC., 2008.

Mankoff, Jeffrey. "Russian Foreign Policy and the United States After Putin." *Problems of Post-Communism* 55, no. 4 (July-August 2008): 42-51.

Millennium Project. "2020 Global Energy Scenarios." http://www.millennium-project.org/ millennium/scenarios/energy-scenarios.html.

Monaghan, Andrew. "Russian Oil and EU Energy Security." *Conflict Studies Research Centre* 5, no. 65 (November 2005): 1-18.

_____. "Russia and the Security of Europe's Energy Supplies: Security in Diversity?" *Conflict Studies Research Centre* 7, no. 2 (January 2007) 1-18.

Novosti, "Russia May Face Gas Supply Crisis in 2 years – Gref," 9 June 2006. http://en.rian.ru/russia/20060906/53580644.html.

Nygren, Bertil. "Putin's Use of Natural Gas to Reintegrate the CIS Region." *Problems of Post-Communism* 55, no. 4 (July-August 2008): 3-15.

Office of the President. *The National Security Strategy of the United States of America*. Washington, DC: The White House, September 2006.

Pirog, Robert. *Russian Oil and Gas Challenges*, CRS Report for Congress. Washington, DC: Congressional Research Service, June 2007.

Rosukrenergo official site. "Company History." http://www.rosukrenergo.ch/eng/pub/company/company_history.html

Rutland, Peter. "Putin's Economic Record: Is the Oil Boom Sustainable?" *Europe-Asia Studies*, 60, no. 6 (August 2008) 1051-1072.

Sandalow, David B., *Freedom From Oil: How the Next President Can End the United States' Oil Addiction*. New York, NY: McGraw-Hill, 2008.

Scearce, Diana, and Fulton, Katherine. *What If? The Art of Scenario Thinking for* Non-*profits* Emeryville, CA: Global Business Network, 2004. http://www.gbn.com/ArticleDisplay Servlet.srv?aid=32655 (accessed 15 October 2008).

Schwartz, Peter. *The Art of the Long View: Planning for the Future in an Uncertain World.* 2nd ed. New York, NY: Doubleday, 1996.

Smith, Mark A. "Russia and the Persian Gulf: The Deepening of Moscow's Middle East Policy." *Conflict Studies Research Centre*, 7 no. 25 (August 2007): 1-10.

Smith, Mark A. "Russian Energy Interests in the Balkans." *Conflict Studies Research Centre*, 8 no. 7 (March 2008): 1-7.

Smith, Mark A., and Giles, Keir. "Russia and the Arctic: The Last Dash North," *Advanced Research and Assessment Group* 7, no. 6 (September 2007): 1-9.

Stratfor, "Global Market Brief: Europe Loosens the Energy Ties that Bind to Russia," 21 August 2007, http://www.strtfor.com/global_market_brief_europe_loosens_energy_ties_bind_russia.

Stratfor, "TNK-BP: The End Begins," 4 September 2008, http://www.stratfor.com/analysis/tnk_bp_ end_ begins.

Woehrel, Steven. *Russian Energy Policy Toward Neighboring Countries*, *CRS Report for Congress*. Washington, DC: Congressional Research Service, March 2008.

World Economic Forum. *Russia and the World: Scenarios to 2025*. Geneva, Switzerland: World Economic Forum. 2006.